



ALABAMA MUNICIPAL INSURANCE CORPORATION MUNICIPAL WORKERS COMPENSATION FUND, INC.



Loss Control Division

OFFICE ERGONOMICS

Date: _____ Time: _____ Department: _____ Person Conducting: _____

Meeting Objective: To help employers and employees design workstations that will maximize employee comfort and productivity, and minimize the risk of employees developing musculoskeletal disorders.

INTRODUCTION

Ergonomics is a discipline that involves arranging the environment to fit the person in it. Following ergonomic principles helps reduce stress and eliminate many potential injuries and disorders associated with the overuse of muscles, bad posture, and repeated tasks. This is accomplished by designing tasks, work spaces, controls, displays, tools, lighting, and equipment to fit the employee's physical capabilities and limitations. It maximizes productivity by reducing employee fatigue and discomfort, a good situation for both employer and employee.

TYPES OF INJURIES

The most common type of ergonomically-related injuries are called musculoskeletal disorders, or sometimes cumulative trauma disorders (CTDs). These are also known as repetitive motion or stress disorders. They account for half of all reported workplace injuries each year. They usually involve pain and damage to muscles, tendons, and nerves in the back, neck, shoulders, wrists, hands, and elbows.

Typical problems of this type include:

- A. Tendonitis.
- B. "Tennis Elbow".
- C. Lower back pain.
- D. Carpal Tunnel Syndrome, which causes hands and wrists to tingle, ache, or become numb.
- E. Reynaud's Syndrome, which causes fingers to become white because not enough blood is circulating.

Musculoskeletal disorders are usually caused by:

- A. Making the same motion over and over.
- B. Staying in the same position too long.
- C. Working in an awkward position that puts stress on muscles and joints.
- D. Working with tools that don't fit your body.
- E. Using a great deal of physical force.
- F. Exposure to heavy vibration over long periods of time.

COMPUTER SET-UP

Computer set-up is the primary ergonomic consideration in the office. Carpal Tunnel Syndrome, the most frequently identified office disorder, is primarily brought on through computer usage. The following aspects of your computer set-up should be designed to fit you and your work environment:

A. KEYBOARD

1. Remember to always strike keys softly.
2. Your hand should glide above the keyboard. While you're keying, try not to rest your palms on the work surface, the edge of the keyboard, or the wrist rest.

3. When the operator's hands are resting on the keyboard, the hand, wrist, and forearm should be in a reasonably straight line, parallel to and slightly above the keyboard. The shoulders should be relaxed with the elbows next to the body.
4. When not actively keying, rest your wrist. Place a foam, gel, or padded support along the front of the keyboard. Be sure the wrist rest is not much above or below the edge of the keyboard.
5. Do your best to keep your wrist straight and relaxed. When you do, your hands can move more freely. Raising the front of the keyboard may help.
6. Keyboard trays can be handy tools. They can make up for a desk that is too high, and they allow more viewing distance between the keyboard and monitor. Some even tilt to help keep your wrists straight when you key. When using a keyboard tray, make sure that the tray:
 - a. Is wide enough to hold both the keyboard and the mouse.
 - b. Does not wobble when you use the keyboard.
 - c. Does not lessen leg room to the point that legs are cramped under the tray.
 - d. Has smooth edges.
7. For best results when using your mouse, be sure to follow these tips:
 - a. Do not choke the mouse. Hold it lightly and click without using force.
 - b. Keep your mouse as close as possible to the side of the keyboard and at the same height and distance as your keyboard.
 - c. Use both the mouse and the keyboard. Alternate between them. Try switching hands when you use the mouse.
 - d. Get a mouse that fits your hand, it should not be too big.

B. MONITOR

1. Monitors should be placed so that your eyes should look straight ahead into it and the screen type is easy to see. Monitors should not be too close, too far, too high, or too low.
2. High quality monitors are preferred. Monitors should have a pixel number of 1,024 x 768 or higher, and a refresh rate of 76hz or higher. Monitors with high luminance and contrast are best. Luminance and contrast can be adjusted to taste.
3. There should be no natural or artificial light reflecting off the screen. Monitors can be placed at a right angle to any window so that no glare is on it from windows or other light sources.
4. Detachable document holders are highly recommended. They keep you from having to crane your neck to see

SELECTING A CHAIR

Chairs are extremely important for your back to feel comfortable and stay injury free. You need a chair that fits you. Personally select a chair or get one designed with adjustable parts. Select a chair that provides:

- A. The proper height - Your feet should reach the floor or footrest and your thighs should be horizontal. This allows blood to flow freely to the legs and feet. Remember, forearms should rest horizontally when at the keyboard.
- B. A seat that is slightly concave with a downward rounded edge prevents sliding forward and distributes your weight. You may want to tilt the seat slightly forward or backward.
- C. Adjust the chair back at an angle and height so that your posture, including the lumbar curve of the lower back, is supported. This prevents lower backaches. The bend at your hips should make a 90 degree angle.
- D. Armrest can be useful, however, they should be low enough to fit under the work surface, and short enough to allow you to get close to your work while maintaining contact with the backrest.

DESKTOP LAYOUT

Your most common and frequent tasks should be considered when setting up your work area. The following are some general tips to follow when setting up your work area for comfort and convenience:

- A. Place the phone on the same side as your dominant hand, (i.e., right side if right handed, left

side if left handed

- B. Have your computer placed at a right angle to windows, (when you face the screen, the window is in your peripheral vision to the right or left, not behind your computer or behind your head).
- C. All available lighting should be utilized to suit the task at hand. If lighting is inadequate, obtain additional lighting in the form of a lamp, under-shelf light, or some other light source.
- D. Keep items that you use most frequently easily accessible, (e.g., heavy manuals used frequently should be stored between bookends on the desktop rather than across the room in a bookshelf).
- E. Always situate yourself in the best way for a given task, (i.e., if reading, turn on a desk lamp, or if using a computer near a window with bright sunlight, pull the shades).

FATIGUE CONTROL - REPETITIOUS OR STRENUOUS ACTIVITY

Another way to avoid musculoskeletal disorders is to minimize repetitious or strenuous activity.

Remember to:

- A. Take breaks, more frequent breaks of shorter duration (3-5 minutes every hour) are better.
- B. Change job tasks. This reduces fatigue and monotony from a stressful task. Reducing the duration of continuous exposure means increasing the rest time by allowing different sets of muscles to be used with a different posture.
- C. Exercise to help relax tight muscles, reduce stress, and lessen the sense of general fatigue.

At this time, ask employees to describe any problems they are having. Have an employee sit at a workstation, allow employees to use what they have learned to critique the computer set-up and design of this particular workstation.

SIGNATURES OF ALL THOSE IN ATTENDANCE

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NOTE: This document is not intended to be legal advice. It does not identify all the issues surrounding the particular topic. Public agencies are encouraged to review their procedures with an expert or an attorney who is knowledgeable about the topic. Reliance on this information is at the sole risk of the user.¹
